**IT Applications Unit 3, AOS 2, Organisations and Data Management**

**Structure and role of relational databases, p 97**

**Structure and role of relational databases**

1. **What is a flat file database?**

A flat file database also known as a single file database stores data in tables consisting of rows and columns. Each column contains a field with a specific piece of information. Each row in the table holds a record.

**Define each of the following terms**

1. **Primary key**

A primary key is a field attached to each record in a database which uniquely identifies each record in the database table.

1. **Fields**

A field relates to a specific piece of information and the means in which it is arranged.

1. **Record**

A record is a set of information about one entity, a person, event or place.

1. **Form**

A form allows an input screen to be formatted and linked to an underlying table or query.

1. **Query**

When you need to filter a set of data, you use a query. The result of a query is usually turned into usable information by putting it into a report.

1. **Report**

A report formats the query data and allows you to add summary statistics such as tools as well as headings to make the information easier to read and understand.

1. **Macros**

Procedures in a database can be automated to some extent by the use of macros. When run, macros will carry out a set of predetermined tasks by the use of buttons/links.

**Data Types and Formats**

**Data Types**

List the following data types and characteristics of each with examples.

* 1. **Text, (string) String data types include a series of symbols or values, such as a character string (a sequence of characters) or a binary string ( a sequence of binary values**

Text is used in fields such as name and address, postcode and telephone number. Fields like postcode and telephone are classified as text numbers as no calculation are going to be performed.

* 1. **Numeric**

Number or numeric fields are used only when you and using a number that needs to have a calculation performed on it such as prices and total amounts.

* 1. **Currency**

Currency refers to any number used to represent a financial value. It will be formatted in dollar amounts; with the $ symbol and .00 as a default.

* 1. **Date/time**

A variation of numbers formatted to represent a date and/or time. For example date of birth, time of completion, appointment time and date, time of sale.

* 1. **Boolean**

Represents one of two states – true/false, yes/no, on/off

* 1. **Object**

Media or other documents such as images, audio and video

* 1. **Memo**

Like text but unlimited; it is not searchable. For example any long section of text such as product details.

**Data Formats**

Elaborate on the following common data formats

1. **Text**

Text fields are/can be formatted to hold a specific number of characters, such as a post code field only accepting four characters or name field holding twenty-five characters.

1. **Fixed Decimal Places**

Fixed decimal places format a fixed number of decimal places. They are applied when using dollars and cents, or when rounding is required and will also appear for whole numbers.

1. **Date**

Date can be displayed in different ways. For example 1/04/11, 1st April 2011, 2011-04-01

1. **Date/time**

Date/time is a variation of date where you can show time in minutes and seconds. In a 12hour clock, hours start at 12:00 and go until 11:59. The use of a.m. and p.m. indicate the part of the day you are in. In 24hour time, hours start at 00:00 and go until 23:59.

1. **Dollar, currency**

Currency, dollar, is displayed by $, and defaults to .00 after the value.

1. **True/false, Boolean logic**

Boolean data is the use of yes/no, true/false or tick the box to answer questions. This speeds up the process and makes the data entry process easier.